

**What is claimed is:**

1. A system comprising at least one collaborative component to eliminate communication barriers between software clients and developers and at least one development component for accelerating software development and enhancing quality assurance.
- 10 2. An online software development system comprising three collaborative components to eliminate communication barriers between software clients and developers and three development components for accelerating software development and enhancing quality assurance.
- 15 3. A system of claim 1 wherein there are three collaborative components to eliminate communication barriers between software clients and developers.
- 20 4. A system of claim 1 wherein there are three interactive development components for accelerating software development and enhancing quality assurance.
- 25 5. A system of claim 1 wherein the collaborative components and the development components work in a parallel fashion to smooth the entire software development process.
- 30 6. A system of claim 3 in which the three collaborative components comprise: (1) a Quality Assurance Project Manager; (2) Collaboration Management & Project Management;

and (3) a Prototype Server.

7. A system of claim 6 wherein communication occurs via the Internet.

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8. A system of claim 6 wherein component (1), the Quality Assurance Project Manager, is responsible for four checkpoints.

10 9. A method of claim 8 wherein the first checkpoint comprises checking the:

a) quality indexes of:

15           ■ accuracy and reliability of plan definition,

■ document completeness, and

20           ■ unity of specification/standard; and

b) items of:

■ plan of project development and

25           ■ specifications of doc./standard.

10. A method of claim 8 wherein the second checkpoint comprises checking the:

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a) quality indexes of:

• accuracy of need definition,

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• determination of acceptance standard,

- completeness of function and data,
- understandability of site structure and its software structure,
- norm degree of data structure,
- guide simplicity,

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- various exchange methods and easiness (exchangeability), and
- access check, data safety and completeness; and

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b) items of:

- need analysis and specification manual,
- specification of system design,
- initial acceptance standard,
- test plan, and
- project progress and fund spending as planned.

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30       11. A method of claim 8 wherein the third checkpoint comprises checking the:

a) quality indexes of:

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- guide simplicity/page layout,

- page visual effect,
- various exchange method and easiness  
5 (exchangeability),
- access check,
- data safety and completeness,
- 10 • robustness,
- response time,
- 15 • program self description (internal notes  
of program); and

b) items of:

- 20 • specifications of system design,
- specifications of detailed design,
- entire effect of prototype, test result  
25 and problem databank, and
- project progress and fund spending as  
planned.

30 12. A method of claim 8 wherein the fourth  
checkpoint comprises checking the:

a) quality indexes of:

- 35 • determination/completedness of

acceptance standard,

- completeness/consistency of document,

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- indexes related to operating system; and

b) items of:

- software configuration,

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- acceptance standard,

- system execution/user training plan, and

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- project progress/fund spending.

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13. A system of claim 6 wherein component (2) (Collaboration Management) comprises multiple management channels, including internal methods among developers (such as a collaborative tool, an intranet-based communication tool and a workflow tool), and external methods between clients and developers (such as a toll-free call center, e-mail, and web conferencing) via a collaboration platform.

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14. A system of claim 6 wherein component (2) (Project Management) comprises:

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a) Development Plan Management;

b) Resource Management (including human resource, code, documents, solutions, etc.);

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c) Expense Management;

- d) Development Trace and Control;
- e) Configuration Management;
- 5 f) Bug Report;
- g) Task Management; and
- 10 h) Project Member Management.

15. A system of claim 6 wherein component (3) (Prototype Server) comprises an on-site prototype server and an in-house prototype server.

20. A system of claim 1 wherein the three development components comprise: (1) a Development Project Manager; (2) CASE Management & Knowledge Management; and (3) a Development Server.

25. A system of claim 16 wherein software developers communicate with each other via an intranet.

30. A system of claim 16 wherein component (1), the Development Project Manager, is responsible for:

- a) leading the development team to make the development plan;
- b) submitting stage development results and finishing the whole development of the project (including testing);

c) coordinating with the QA team and clients to revise the development result in order to meet clients' requirements; and

5  
d) assuring software quality required by the QA team.

10 19. A system of claim 16 wherein component (2), Computer-Aided Software Engineering (CASE) Management, comprises all activities of the whole software survival period, including: personnel organizing and managing, plan management, standardized management, software configuring management, software quality assurance management, spending management, project-tracing, and process controlling management.

15 20. A system of claim 16 wherein component (2), Knowledge Management, is the core technical support and knowledge-sharing platform.

20 21. A system of claim 16 wherein component (3), the Development Server, comprises a Collaborative Platform in which Workflow is the tool used to record and monitor all detailed activities of programmers according to different conditions.

25 22. A system of claim 21 wherein the Collaborative Platform comprises a Configuration Management Server, a Multi-Platform Server, and a Client-Based Database.

30 23. A system of claim 1 wherein the online software development environment seamlessly connects

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vendors and buyers of software in terms of dual project managers using dual management tools and dual servers in dual platforms.

5        24. A system of claim 23 wherein the dual project managers comprise the Development Project Manager and the Quality Assurance Project Manager.

10      25. A system of claim 23 wherein the dual managements comprise: a) Knowledge Management and Computer-Aided Software Engineering (CASE) & b) Quality Assurance (QA) Management.

15      26. A method of claim 25 wherein Knowledge Management gives software users access to a full range of services, including, but not limited to, information management, project management, resource center, user management, system maintenance, and technical communication.

20      27. A method of claim 26 wherein an interface allows third-party software plug in and integrate so as to fully utilize all functions.

25      28. A method of claim 25 wherein Quality Assurance (QA) Management is handled by the Quality Assurance Manager.

30      29. A method of claim 23 wherein the dual servers comprise Development Server and Prototype Server, which work concurrently.

35      30. A method of claim 29 wherein Development Server is used by the project's software programmers

and Prototype Server is used by software clients.

5           31. A method of claim 29 wherein the two servers are independent and linked by Change Management.

10          32. A method of claim 31 wherein Change Management is delivered through an integrated, project-oriented incident management system.

15          33. A method of claim 32 wherein each workstation includes its own integrated defect tracking system which links defects to particular pieces of the software code.

20          34. A method of claim 23 wherein the dual platforms comprise an intranet used by software programmers to access data internally and the Internet used by software clients to access their information.